

### Abstract

The invention provides a method of preparing a biological components-containing solution suitable for clinical proteome analysis by mass spectrometry, electrophoresis, liquid chromatography or the like and an apparatus for the method. The method of the invention is a method for combining two steps among steps of (1) adsorbing proteins having a molecular weight equal to or higher than that of albumin; (2) fractionating proteins having a molecular weight equal to or higher than that of albumin; and (3) concentrating proteins: or a method for preparing the solution by separation using a membrane separation unit having a comparative permeation ratio of 50 or higher for proteins with a molecular weight less than 15,000 and proteins with a molecular weight of 60,000 or higher; or a method for preparing the solution by introducing a biological components-containing raw solution into a separation membrane module and successively passing a diluting solution for circulating the solution and passing a portion of the solution through a separation membrane.